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SIDLEY & AUSTIN
717 N HARWOOD
SUITE 3400
DALLAS TX 75201-6507

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/082,127

Applicant(s)

Takenori Idehara et al.

Examiner

King Y. Poon

Group Art Unit
2724



☐ Responsive to communication(s) filed on _____

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-55 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-55 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 2724

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1, 2, 6, 7, 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Ooki.

Regarding claim 1: Ooki teaches a machine readable medium (104 of fig. 1) on which utility program (the program controlling the display of information of the printers of fig. 2, column 3 line 15-25) started up in a linked manner by an application program (the program that initiates the selection of the printers and sending information to be recorded to a printer of column 5 line 35-45, and column 1 line 25-30) giving a print command (the command that starts the program of fig 4) to an image forming apparatus (101 of fig. 1) connected to a network (100 of fig. 1) is recorded, the utility program comprising: a display step (fig. 2) displaying locations of image forming apparatuses (101 fig 1 and column 7 line 10-20) connected to the network on a display means (column 7 line 14); and a select step selecting an image forming apparatus designated by a user (see priority set by a user of fig. 2) as an output destination of an image. (Column 4 line 20-65)

Art Unit: 2724

Regarding claim 2: Ooki teaches a machine readable medium according to claim 1, wherein the display step further includes a sub-step of displaying information indicating whether or not each of the image forming apparatuses connected to the network is usable on the display means. (See fig. 5 showing printer A is usable to print 600dpi and not usable to print 300 dpi)

Regarding claim 6: Ooki teaches that the display step further includes a sub-step being executed in response to the print command given by the application program. (See the step being executed of column 6 line 50-55)

Regarding claim 7: Ooki teaches that the display step further includes a sub-step displaying characters describing the name of each of the image forming apparatuses (printer name of column 7 line 10) and characters describing a location at which each of the image forming apparatuses (see 701 of fig. 7, and column 7 line 10) is installed on the display means.

Regarding claim 8: Ooki teaches a machine readable medium (104 of fig. 1) on which application program (the program that initiates the selection of the printers and sending information to be recorded to a printer of column 5 line 35-45, and column 1 line 25-30) capable of giving a print command (the command that starts the program of fig 4) to an image forming apparatus (101 of fig. 1) connected to a network is recorded, (100 of fig. 1) the application program comprises: a display step (fig. 2) displaying locations at which image forming apparatuses connected to the network (101 of fig. 1, column 7 line 10-20) are installed on a display means (column 7 line 14); and a select step selecting one of the image forming apparatuses selected by user as an output destination of an image. (Column 4 line 20-65)

Art Unit: 2724

3. Claims 9, 10, 14, 15, 25, 26, 33, 36, 37, 42, 43, 54, 55 are rejected under 35

U.S.C. 102(e) as being anticipated by Sugiyama et al..

Regarding claim 9: Sugiyama teaches a machine readable medium (56 of fig. 2) on which program for selecting a desired input-output apparatus (see column 75 line 30-55) from a plurality of input-output apparatuses (100, 200 of fig. 1) connected to a network (column 11 line 1) is recorded, (fig. 1, and fig. 4) the program comprises: a first display step classifying the input-output apparatuses into a plurality of categories (see printer and scanner of fig. 91) with different functions and displaying functions on a display means as items of selection; (fig. 91) and a second display step of displaying only the input-output apparatuses having one of the functions selected by user on the display means as items of selection. (See the display of scan parameter of fig. 91)

Regarding claim 14: Sugiyama teaches a machine readable medium (56 of fig. 2) on which program for selecting a desired input-output apparatus (see column 75 line 30-55) from a plurality of input-output apparatuses (100, 200 of fig. 1) connected to a network (column 11 line 1) is recorded, the program comprises: a first display step classifying said input-output apparatuses into a plurality of categories with different pieces of user identification information and (see printer and scanner of fig. 91, abstract) displaying the pieces of user identification information (see scan parameter of fig. 91, abstract) on a display means as items of selection; (fig. 91) and a second display step of displaying only the input-output apparatuses having one of

Art Unit: 2724

the pieces of user identification information selected by user on the display means as items of selection. (See the display of scan parameter of fig. 91)

Regarding claims 10, 15: Sugiyama teaches a machine readable medium according to claim 9, wherein the second display step includes a sub-step displaying information indicating whether or not each of the input-output apparatuses is usable on said display means. (See fig.91 showing that scanner C is usable for 400 dpi of scanning and not usable to scan, for example, using 600 dpi)

Regarding claim 25: Sugiyama teaches an input-output apparatus selecting method (see column 75 line 30-55) for selecting a desired input-output apparatus from a plurality of input-output apparatuses connected to a network system, (see fig. 1, fig. 2) the input-output apparatus selecting method comprising: a step classifying the input-output apparatuses connected to the network system into a plurality of categories with different functions and displaying the functions on a display means as items of selection; (see scanner and printer of fig. 91) and a step displaying only the input-output apparatuses having one of the functions selected by the user on the display means as items of selection. (See scan parameter of fig. 91)

Regarding claim 26: Sugiyama teaches an input-output apparatus selecting method (see column 75 line 30-55) for selecting a desired input-output apparatus from a plurality of input-output apparatuses connected to a network system, (see fig. 1, 2) wherein the apparatuses are cataloged by classifying the apparatuses into groups identified by user identification codes, (see printer A, printer B, scanner A, scanner B, of fig. 91) the input-output apparatus selecting

Art Unit: 2724

method comprising: a step displaying the user identification codes on a display means (fig. 91) as items of selection; and a step displaying only the input-output apparatuses cataloged in one of the groups identified by one of the user identification codes selected by the user on the display means as items of selection. (See the display of printer A, printer B, printer C or scanner A, scanner B, scanner C of fig. 91)

Regarding claims 33, 37: Sugiyama teaches a machine readable medium (56 of fig. 2) on which program written for a network system (column 11 line 1) to which a plurality of input-output apparatuses (100, 200 of fig. 1) and pluralities of computers (fig. 2) are connected is recorded, the program comprises: a first step classifying the input-output apparatuses into a plurality of categories (see scanner and printer of fig. 91) having different functions and displaying the functions on a display means as items of selection; (see scan parameter of fig. 91) a second step displaying only the input-output apparatuses pertaining to one of the categories having a function selected from the functions displayed at the first step on the display means as items of selection; (see the display of printer A,B, C or scanner A, B, C of fig. 91) and a third step specifying an input-output apparatus selected from the input-output apparatuses displayed at second step as an input-output destination. (See column 75 line 30-55)

Regarding claim 36: Sugiyama teaches a network system (fig. 1 and fig. 2) connecting a plurality of computers (fig.2) and a plurality of input-output apparatuses, (100, 200 of fig. 1) the network system comprising: a function information table (parameter of fig. 91) for storing pieces of function information on the input-output apparatuses; a function information table storage

Art Unit: 2724

unit 2102 of fig. 63) for storing function information table; an apparatus displaying means (fig. 91) for displaying only the input-output apparatuses (see scanner A, B, C of fig. 91) having a piece of function information selected from the pieces of function information; an apparatus selecting means (K of column 75 line 30-55) for selecting one of the input-output apparatuses displayed by the apparatus displaying means; and an apparatus specifying means (K of column 75 line 30-55) for specifying the input-output apparatus selected by the apparatus selecting means as an input-output destination.

Regarding claim 42: Sugiyama teaches a machine readable medium (56 of fig. 2) on which program written for a copying machine (100, 200 of fig. 1, and 665 of column 45 line 47) connected to a network (column 11 line 1) is recorded, the program comprises: a display step (fig. 91) displaying output apparatuses each capable of executing some or all of functions of the copying machine on a display means as items of selection (see column 75 line 30-40) in case the functions are found inadequate for carrying out a copy job by said copying machine alone; (see column 63 line 50-65) and a specification step specifying (see column 75 line 50-55) an output apparatus selected from the output apparatuses displayed at the display step as a substitute apparatus to serve as an output destination.

Regarding claim 43: Sugiyama teaches to allocating a part (one of the print files to be printed by the copier of column 63, line 15-30) of a load of a requested job (all the print files to be printed by the copier) to the substitute apparatus (column 63 line 60-65) in case the requested

Art Unit: 2724

job exceeds an upper limit of the functions (the limit that the printer cannot print one of the files, column 63 line 50-60) of the copying machine.

Regarding claims 54, 55: Sugiyama teaches a copying machine (100, 200 of fig. 1, and 665 of column 45 line 47) connected to a network, the copying machine comprising: an apparatus information table storage means (2102 of fig. 63) for storing an apparatus information table for cataloging information on output apparatuses each capable of serving as a substitute for functions of the copying machine; (see scanner and printer of fig. 91, and column 75 line 30-40, and column 63, line 60-67) a display means (fig. 91) for displaying the output apparatuses; and a data transferring means (2102 of fig. 63) for displaying the output apparatuses each capable of executing some or all of the functions of the copying machine on the display means (column 75 line 30-40) as items of selection in case the functions are found inadequate for carrying out a copy job by the copying machine alone (see column 63 line 50-67) and for transferring data of the copy job to one of the displayed output apparatuses selected (column 63 line 65-67, column 64 line 1-2) as a substitute output apparatus to serve as an output destination.

4. Claims 28-32, 38-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Dev.

Regarding claim 28: Dev teaches a machine readable medium (see workstation of column 4 line 35-55) on which program for selecting (abstract) an input-output apparatus from a plurality of input-output apparatuses (network device of abstract) connected to a network is recorded,

Art Unit: 2724

the program comprises: a layout diagram displaying step displaying a layout diagram of a room on a display means; (fig. 7C) an icon displaying step displaying icons (abstract) each representing one of the input- output apparatuses at locations corresponding to actual installation locations of the input-output apparatuses in the room as items of selection over the layout diagram displayed on the display means at the layout diagram displaying step; (fig 7C and column 13 line 1-10) and an input-output selecting step selecting one of the input-output apparatuses represented by an icon selected from the icons displayed at the icon displaying step. (abstract)

Regarding claim 29: Dev teaches that the icon displaying step further includes a sub-step displaying status (detail information of abstract) of each of the input-output apparatuses at a location (see main computer lab of fig. 7C) in close proximity to one of the icons representing the input-output apparatus on the display means.

Note: the lab is in close proximity to the icons because the icons are inside the room as shown in fig.7C.

Regarding claim 30: Dev teaches that the layout diagram is received from another one of the input-output apparatuses through the network. (See fig. 1, column 3 line 58-65, and column 4 line 48-55)

Regarding claim 31: Dev teaches that the layout diagram comprises a plurality of layout diagrams organized as layers at different levels composing a hierarchical structure. (See fig. 7A, 7B, 7C)

Art Unit: 2724

Regarding claim 32: Dev teaches a network system connecting a plurality of computers and a plurality of input-output apparatuses, (fig 2 and abstract) the network system comprising: a layout image storage means (16 of fig. 1, and column 3 line 60-65) for storing a layout image representing a layout of the input-output apparatuses; (fig. 7A, B, C) an apparatus information table storage means (16 of fig. 1) for storing an apparatus information table for cataloging information on said input-output apparatuses; (fig. 3) a display means (abstract) for displaying the layout image; and an input-output apparatus specifying means (10 of fig. 1) for displaying icons each representing one of the input-output apparatuses at locations (see computer lab of fig. 7C) corresponding to actual installation locations of the input-output apparatuses over the layout image displayed on the display means as items of selection and selecting one of the input-output apparatuses represented by an icon selected from the icons as an input-output destination.

(abstract)

Regarding claims 38, 41: Dev teaches a machine readable medium (see workstation of column 4 line 35-55) on which program (column 4 line 35-55) for a network system connecting a plurality of computers and a plurality of input-output apparatuses (fig. 2) is recorded the program comprises: a user name displaying (see main computer lab, administration of fig. 7B regularly using the network to communicate with other network stations) step displaying the names of users regularly using said network system as items of selection; (the main computer lab is to be selected by other workstations, see abstract) a user name selecting step selecting one of the names displayed at said user name displaying step; an input-output apparatus displaying step

Art Unit: 2724

displaying only the input-output apparatuses associated with one of the users with the name thereof selected at the user name selecting step as items of selection; (see main computer lab being selected of fig. 7C) and an input-output apparatus selecting step selecting a desired one of the input-output apparatuses displayed at the input-output apparatus displaying step as an input-output destination. (See fig. 7C, 8A, and abstract)

Regarding claim 39: Dev teaches that the user name displaying step further includes a sub-step of displaying the names of the users (see users: quality assurance group, hardware development group, and software development group of fig. 8B) on a layout diagram (fig. 8B) along with icons each representing one of the input-output apparatuses. (344, 342, 340 of fig. 8B)

Regarding claim 40: Dev teaches a step of creating a plurality of images (column 4 line 25-30) or tables each showing installation locations of the input-output apparatuses on layers at different levels forming a hierarchical structure; (fig. 7A, B, C) a step displaying a high level image or a high level table on one of the layers at a high level in the hierarchical structure wherein the high level image or the high level table shows items of selection; and a step displaying a low level image or a low level table on another one of the layers at a level immediately lower than the high level in the hierarchical structure wherein the low level image or the low level table is determined by an item selected from the items of selection shown in the high level image or the high level table. (See column 12 line 40-67, and column 13 line 1-40)

Art Unit: 2724

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooki in view of Dev et al.

Regarding claim 3: Ooki teaches all of the claimed limitations except that the display step further includes a sub-step of displaying a map of the network and symbolic marks each representing one of the image forming apparatuses at installation locations of the image forming apparatuses on the map on the display means.

Dev teaches to display a map of the network and symbolic marks (320 of fig. 7c) each representing one of the image forming apparatuses at installation locations of the image forming apparatuses on the map on a display means. (See fig. 7A and 7B, column 5 line 26, column 13 line 1-10, abstract) Ooki and Dev are combinable because they are from the same area of monitoring apparatuses on a network.

Therefore, at the time of invention it would have been obvious to one of ordinary skill in the art to modify the display method of Ooki by displaying a map of the network and symbolic

Art Unit: 2724

marks each representing one of the image forming apparatuses at installation locations of the image forming apparatuses on the map on the display means, as taught by Dev. The suggestion of doing so would provide a user with complete and precise representation of the network system such that the system would be more flexible and extendable, as taught by Dev. (See column 2 line 1-15) Therefore, it would have been obvious to combine Dev and Ooki to obtain the invention as specified in claim 3.

Regarding claim 4: Ooki teaches that the selecting step further includes a sub-step selecting one of the image forming apparatuses. (see column 1 line 65-67, column 2 line 1-2) As discussed in claim 3, the combine teaching of Ooki and Dev teaches to represent the printers by the symbolic marks. The selected printer and the unselected printer would be represented by two different symbolic marks on a map.

Note: a printer is used as an output destination of an image.

Regarding claim 5: Ooki teaches that the display step further includes a sub-step displaying information indicating whether or not each of the image forming apparatuses is usable at the location. (See fig. 5 showing printer A is usable to print 600dpi and not usable to print 300 dpi)

Note: The map of the printer (symbolic mark) in the display would indicate a location in close proximity representing the image forming apparatus on the display means.

7. Claims 11-13, 16-24, 27, 34, 35, 45, 46, 48, 49, 51, 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiyama et al. in view of Dev et al.

Art Unit: 2724

Regarding claims 11, 16: Sugiyama teaches all of the claimed limitations except that the display step further includes a sub-step of displaying a map of the network and symbolic marks each representing one of the image forming apparatuses at installation locations of the image forming apparatuses on the map on the display means.

Dev teaches to display a map of the network and symbolic marks (320 of fig. 7c) each representing one of the image forming apparatuses at installation locations of the image forming apparatuses on the map on a display means. (See fig. 7A and 7B, column 5 line 26, column 13 line 1-10, abstract) Sugiyama and Dev are combinable because they are from the same area of monitoring apparatuses on a network.

Therefore, at the time of invention it would have been obvious to one of ordinary skill in the art to modify the display method of Sugiyama by displaying a map of the network and symbolic marks each representing one of the image forming apparatuses at installation locations of the image forming apparatuses on the map on the display means, as taught by Dev. The suggestion of doing so would provide a user with complete and precise representation of the network system such that the system would be more flexible and extendable, as taught by Dev. (See column 2 line 1-15) Therefore, it would have been obvious to combine Dev and Sugiyama to obtain the invention as specified in claim 11.

Regarding claims 12, 17: Sugiyama teaches that the selecting step further includes a sub-step selecting one of the image forming apparatuses to be used by a user. (see column 75 line 30-55) As discussed in claim 11, the combine teaching of Sugiyama and Dev teaches to

Art Unit: 2724

represent the printers/scanners by the symbolic marks. The selected printer and the unselected printer would be represented by two different symbolic marks on a map.

Regarding claims 13, 18: Sugiyama teaches that the display step further includes a sub-step displaying information indicating whether or not each of the image forming apparatuses is usable at the location. (See fig.91 showing that scanner C is usable for 400 dpi of scanning and not usable to scan, for example, 600 dpi)

Regarding claims: 19, 27: Sugiyama teaches a machine readable medium (56 of fig. 2) on which program for selecting a desired image forming apparatus from a plurality of image forming apparatuses (100, 200 of fig. 1) connected to a network is recorded, (column 11 line 1) the program comprises: a select step selecting one of the image forming apparatuses designated by the user as an output destination; (column 75 line 30-55) a judgment step judging whether or not the image forming apparatus set at the select step is capable of carrying out printing; (column 63 line 50-55) and a display step (fig. 91) displaying the image forming apparatuses which are capable of carrying out printing to serve as a substitute for the image forming apparatus set at the select step on a display means in case an outcome of the judgment formed at the judgment step indicates that the image forming apparatus set at the select step would not carry out printing. (Fig. 91, column 75, line 37-41)

Sugiyama does not teach to display the installation location of the image forming apparatus.

Art Unit: 2724

However, Dev teaches to display the installation location of the network devices (image forming apparatus) while displaying the network device. (See abstract) Sugiyama and Dev are combinable because they are from the same area of displaying network devices.

Therefore, at the time of invention, it would have been obvious to modify the display method of Sugiyama by displaying the installation location of the image forming apparatus while displaying the image forming apparatus, as taught by Dev. The suggestion of doing so would provide a user with complete and precise representation of the network system such that the system would be more flexible and extendable, as taught by Dev. (See column 2 line 1-15) Therefore, it would have been obvious to combine Dev and Sugiyama to obtain the invention as specified in claims 19, 27.

Regarding claim 20: Sugiyama teaches all of the claimed limitations except that the display step further includes a sub-step of displaying a map of the network and symbolic marks each representing one of the image forming apparatuses at installation locations of the image forming apparatuses on the map on the display means.

Dev teaches to display a map of the network and symbolic marks (320 of fig. 7c) each representing one of the image forming apparatuses at installation locations of the image forming apparatuses on the map on a display means. (See fig. 7A and 7B, column 5 line 26, column 13 line 1-10, abstract) Sugiyama and Dev are combinable because they are from the same area of monitoring apparatuses on a network.

Art Unit: 2724

Therefore, at the time of invention it would have been obvious to one of ordinary skill in the art to modify the display method of Sugiyama by displaying a map of the network and symbolic marks each representing one of the image forming apparatuses at installation locations of the image forming apparatuses on the map on the display means, as taught by Dev. The suggestion of doing so would provide a user with complete and precise representation of the network system such that the system would be more flexible and extendable, as taught by Dev. (See column 2 line 1-15)

Regarding claim 21: Sugiyama teaches that the selecting step further includes a sub-step selecting one of the image forming apparatuses to be used by a user. (see column 75 line 30-55) As discussed in claim 20, the combine teaching of Sugiyama and Dev teaches to represent the printers/scanners by the symbolic marks. The selected printer and the unselected printer would be represented by two different symbolic marks on a map.

Regarding claim 22: Sugiyama and Dev teach to display characters describing the name of each of the image forming apparatuses and characters describing a location at which each of the image forming apparatuses is installed on the display means. (See printerA, B, C of fig. 91 of Sugiyama, and fig. 7c of Dev.)

Regarding claim 23: Sugiyama teaches an output apparatus selecting method (column 75 line 30-55) to be adopted in a network system (column 11 line 1) to which a plurality of image forming apparatuses (100, 200 of fig.1) and a plurality of computers (fig. 2) are connected, the output apparatus selecting method comprising: a first step displaying the image forming

Art Unit: 2724

apparatuses on a display means of one of the computers in response to an output command (BT4 of column 75 line 30) issued by an application program (56, fig. 2) running on the computer; a second step pointing to one of the image forming apparatuses displayed on the display means at the first step; (column 75 line 30-55) and a third step specifying the image forming apparatus on the display means pointed to at the second step as an output destination of images. (Column 75 line 50-55)

Sugiyama does not teach to display the installation location of the image forming apparatus, and point to the one of the installation locations of the image forming apparatus on the display to select (specify) the image forming apparatus.

However, Dev teaches to display the installation location of the network devices (image forming apparatus) while displaying the network device, (See abstract) and to point to one of the installation locations of the network device on the display to select (specify) the network device. (Abstract and fig. 7A, B, C) Sugiyama and Dev are combinable because they are from the same area of displaying network devices.

Therefore, at the time of invention, it would have been obvious to modify the display and device selection method of Sugiyama by displaying the installation location of the image forming apparatus while displaying the image forming apparatus, and to point to one of the installation locations of the image forming apparatus on the display to select (specify) the image forming apparatus, as taught by Dev. The suggestion of doing so would provide a user with complete and precise representation of the network system such that a network device such as an image

Art Unit: 2724

processing apparatus would be easily selected by the user and thereby, the system would be more flexible and extendable, as taught by Dev. (See column 2 line 1-15) Therefore, it would have been obvious to combine Dev and Sugiyama to obtain the invention as specified in claim 23.

Regarding claim 24: Sugiyama teaches an output apparatus selecting method to be adopted in a network system according to claim 23, wherein the first step is interlocked with a print command (1 of fig. 92) issued by an application program (56 of fig. 2) running on the computer.

Regarding claim 34: Sugiyama teaches: a step displaying of the input-output apparatuses as items of selection; (fig. 91) and a step selecting one of the input-output apparatuses as an input-output destination. (Column 75 line 30-55)

Sugiyama does not teach while displaying the input-output apparatuses for selection, to display a layout image representing locations of the input-output apparatuses on the display means, display icons each representing one of the input-output apparatuses at locations corresponding to actual installation locations of the input-output apparatuses over the layout image displayed on the display means as items of selection, and select one of the input-output apparatuses represented by an icon selected from the icons as an input-output destination.

Dev teaches while displaying the input-output apparatuses for selection, (abstract) to display a layout image representing locations of the input-output apparatuses on the display means, (fig. 7A, B, C) display icons (abstract) each representing one of the input-output apparatuses at locations corresponding to actual installation locations of the input-output

Art Unit: 2724

apparatuses over the layout image displayed on the display means as items of selection, and select one of the input-output apparatuses represented by an icon selected from the icons as an input-output destination. (abstract) Sugiyama and Dev are combinable because they are from the same area of displaying network devices.

Therefore, at the time of invention, it would have been obvious to modify the display and device selection method of Sugiyama by: while displaying the input-output apparatuses for selection, to display a layout image representing locations of the input-output apparatuses on the display means, display icons each representing one of the input-output apparatuses at locations corresponding to actual installation locations of the input-output apparatuses over the layout image displayed on the display means as items of selection, and select one of the input-output apparatuses represented by an icon selected from the icons as an input-output destination, as taught by Dev. The suggestion of doing so would provide a user with complete and precise representation of the network system such that a network device such as an input-output device would be easily selected by the user and thereby, the system would be more flexible and extendable, as taught by Dev. (See column 2 line 1-15) Therefore, it would have been obvious to combine Dev and Sugiyama to obtain the invention as specified in claim 34.

Regarding claim 35: Sugiyama teaches to create a plurality of images or tables each showing the input-output apparatuses on layers of different levels forming a hierarchical structure and storing the hierarchical structure; (fig. 91, and 2102 of fig. 63) a step displaying a high level image or a high level table (see scanner or printer of fig. 91) on one of the layers at a high level in

Art Unit: 2724

the hierarchical structure wherein the high level image or the high level table shows items of selection; (see printer A, B, C of fig. 91) and a step displaying a low level image or a low level table (see parameter of fig. 91) on another one of the layers at a level immediately lower than the high level in the hierarchical structure wherein the low level image or the low level table is determined by an item selected from the items of selection shown in the high level image or the high level table.

Sugiyama does not teach to display the installation location of the image forming apparatus.

However, Dev teaches to display the installation location of the network devices (image forming apparatus) while displaying the network device. (See abstract) Sugiyama and Dev are combinable because they are from the same area of displaying network devices.

Therefore, at the time of invention, it would have been obvious to modify the display method of Sugiyama by displaying the installation location of the image forming apparatus while displaying the image forming apparatus, as taught by Dev. The suggestion of doing so would provide a user with complete and precise representation of the network system such that the system would be more flexible and extendable, as taught by Dev. (See column 2 line 1-15) Therefore, it would have been obvious to combine Dev and Sugiyama to obtain the invention as specified in claim 35.

Art Unit: 2724

Regarding claim 45: Sugiyama teaches an image display displaying a layout of the output apparatuses on the display means (fig. 91) and to select (specify) the output apparatus as an output destination for a print job. (See column 75 line 30-55).

Sugiyama does not teach a location displaying step to display the location of the output apparatus on the layout, an icon displaying step displaying icons each representing one of the output apparatuses over the layout image at locations on the display means corresponding to actual installation locations of the output apparatuses as items of selection, an icon distinguishing step distinguishing an icon selected from the icons from the rest, and an apparatus specifying step specifying one of the output apparatuses represented by the selected icon as an output destination.

Dev teaches a location displaying step to display the location of the output apparatus on the layout, (abstract, fig. 7 A, B, C) an icon displaying step displaying icons each representing one of the output apparatuses over the layout image at locations on the display means corresponding to actual installation locations of the output apparatuses as items of selection, (abstract, fig. 7 A, B, C) an icon distinguishing step distinguishing an icon selected from the icons from the rest, (abstract, fig. 7 A, B, C) and an apparatus specifying step specifying one of the output apparatuses represented by the selected icon as an output destination. (See poll or communicate of abstract)

Therefore, at the time of invention, it would have been obvious to one of ordinary skill in the art to modify the apparatus display method of Sugiyama by providing the method with a location displaying step to display the location of the output apparatus on the layout, an icon

Art Unit: 2724

displaying step displaying icons each representing one of the output apparatuses over the layout image at locations on the display means corresponding to actual installation locations of the output apparatuses as items of selection, an icon distinguishing step distinguishing an icon selected from the icons from the rest, and an apparatus specifying step specifying one of the output apparatuses represented by the selected icon as an output destination, as taught by Dev. The suggestion of doing so would provide a user with complete and precise representation of the network system such that a network device such as an image processing apparatus would be easily selected by the user and thereby, the system would be more flexible and extendable, as taught by Dev. (See column 2 line 1-15) Therefore, it would have been obvious to combine Dev and Sugiyama to obtain the invention as specified in claim 45.

Regarding claim 46: Sugiyama teaches to allocating a part (one of the print files to be printed by the copier of column 63, line 15-30) of a load of a requested job (all the print files to be printed by the copier) to the substitute apparatus (column 63 line 60-65) in case the requested job exceeds an upper limit of the functions (the limit that the printer cannot print one of the files, column 63 line 50-60) of the copying machine.

Regarding claim 48: Sugiyama teaches a display step displaying all output apparatuses each capable of serving as an output substitute for the copying machine on the display means (fig. 91, column 75 line 30-40) as items of selection; and a select step selecting (column 75 line 30-55, column 63 line 50-67) one of the output apparatuses located in closest proximity to the copying machine.

Art Unit: 2724

Note: since the output apparatus is used to substitute the copy machine, the output apparatus is in closest proximity to the copy machine.

Regarding claim 49: Sugiyama teaches to allocating a part (one of the print files to be printed by the copier of column 63, line 15-30) of a load of a requested job (all the print files to be printed by the copier) to the substitute apparatus (column 63 line 60-65) in case the requested job exceeds an upper limit of the functions (the limit that the printer cannot print one of the files, column 63 line 50-60) of the copying machine.

Regarding claim 51: Sugiyama teaches a step allowing a user to select another one of the output apparatuses used to replace one of the output apparatuses once selected by the copying machine. (See column 63 line 50-65, column 75 line 30-55)

Note: the process of Sugiyama would be used repeatedly until an output apparatus that would print out the print job of the user is selected.

Regarding claim 52: Sugiyama teaches to allocating a part (one of the print files to be printed by the copier of column 63, line 15-30) of a load of a requested job (all the print files to be printed by the copier) to the substitute apparatus (column 63 line 60-65) in case the requested job exceeds an upper limit of the functions (the limit that the printer cannot print one of the files, column 63 line 50-60) of the copying machine.

8. Claims 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiyama in view of Barry et al.

Art Unit: 2724

Regarding claim 44: Sugiyama teaches all of the claim limitations except allocating a part of a load of a requested job to the substitute apparatus in case it takes a longer time to execute the requested job by using the copying machine alone than a predetermined value.

Barry teaches to allocate a part of a load of a requested job (see print job of engine 1 of table 1 of column 11) of print engine 1 to the substitute apparatus (see page 3, 4, 5, 6 is route to other printers) in case it takes a longer time to execute the requested job by using the print engine 1 alone (see column 11 line 45-65) than a predetermined value. (200 minus 8 in Barry's case, see column 11 line 63, and column 12 line 12) Barry and Sugiyama are combinable because they are from the same area of printing using printers/copiers.

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the printing method of Sugiyama by allocating a part of a load of a requested job to the substitute apparatus in case it takes a longer time to execute the requested job by using the copying machine alone than a predetermined value, as taught by Barry. The motivation of doing so is to speed up printing process. (see column 11 line 63, and column 12 line 12 of Barry) Therefore, it would have been obvious to combine Barry and Sugiyama to obtain the invention as specified by claim 44.

9. Claims 47, 50, 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiyama et al. in view of Dev et al. as applied to claim 45, 48, 51 above, and further in view of Barry et al.

Art Unit: 2724

Regarding claims 47, 50, 53: Sugiyama teaches all of the claim limitations except allocating a part of a load of a requested job to the substitute apparatus in case it takes a longer time to execute the requested job by using the copying machine alone than a predetermined value.

Barry teaches to allocate a part of a load of a requested job (see print job of engine 1 of table 1 of column 11) of print engine 1 to the substitute apparatus (see page 3, 4, 5, 6 is route to other printers) in case it takes a longer time to execute the requested job by using the print engine 1 alone (see column 11 line 45-65) than a predetermined value. (200 minus 8 in Barry's case, see column 11 line 63, and column 12 line 12) Barry and Sugiyama are combinable because they are from the same area of printing using printers/copiers.

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the printing method of Sugiyama by allocating a part of a load of a requested job to the substitute apparatus in case it takes a longer time to execute the requested job by using the copying machine alone than a predetermined value, as taught by Barry. The motivation of doing so is to speed up printing process. (see column 11 line 63, and column 12 line 12 of Barry) Therefore, it would have been obvious to combine Barry and Sugiyama to obtain the invention as specified by claims 47, 50, 53.

Art Unit: 2724

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is (703) 305-0892 or to Supervisor Mr. David Moore whose phone number is (703) 308-7452.

A handwritten signature in cursive script that reads "David K. Moore".

July 28, 2000

DAVID K. MOORE
SUPERVISORY PATENT EXAMINER
GROUP 2700